

**WASHINGTON STATE DEPARTMENT OF HEALTH  
OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS**

**ANNUAL GROWING AREA REVIEW**

**PREPARED BY:** Donald Melvin, Environmental Specialist

**AREA:** Drayton Harbor

**YEAR ENDING:** December 31, 2005

**CLASSIFICATION:** Conditionally Approved, Prohibited

**ACTIVITIES IN THE GROWING AREA IN 2005:**

Samples were collected monthly from each station in the “conditionally approved” portion of the growing area using the systematic random sampling method. The area was sampled 9 times in 2005 when it was in open status under the current management plan. The area was closed for a total of 90 days due to rainfall. The area was closed for 13 days due to an agricultural manure spill. A hydrographic study was conducted in Semiahmoo Bay. The boundaries of the “conditionally approved” area were modified due to the findings of the hydrographic study.

**ANALYTICAL RESULTS OF WATER SAMPLES:**

Table #1 summarizes the results of all samples collected from the area when the “conditionally approved” area was open for harvest. This summary shows that the “conditionally approved” stations pass the water quality standard but stations #3, and #4 are threatened and stations #5 and #12 are of concern due to elevated bacteria levels. Water sample results from the “prohibited” area station #6 are used to support the current location of the “conditionally approved” area boundary line. Table #1 shows that station #6 passes the water quality standard but with an estimated 90<sup>th</sup> percentile of 37, would be listed as threatened if it was located within the “conditionally approved” area. Individual sampling results for stations #3, #4, and #6 are shown in Tables #2, #3 and #4 respectively. The shaded rows in Tables #2 #3, and #4 are sampling events that were conducted when the “conditionally approved” area was closed to harvest under the current management plan. These sampling dates are excluded from the Table #1 data summary.

**CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:**

We currently have no information indicating that the area has new sources of pollution.

**CLASSIFICATION STATUS:**

- ☐ Well within the classification standards
- ☐ Meets standards but some concerns
- ☒ Meets standards but threatened with a downgrade in classification
- ☐ Fails to meet classification standards

**REMARKS AND RECOMMENDATIONS:**

Table #1 shows that all stations in the ‘conditionally approved’ area pass the NSSP Approved water quality standards under the current management plan. Marine waters near the mouth of Drayton Harbor and segments of Dakota and California creeks are on the 303D list for fecal coliform.

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***MANAGEMENT PLAN EVALUATION – BRIEFLY DESCRIBE THE FOLLOWING COMPONENTS:***

1. Have all parties involved complied with the conditions in the management plan .....Yes
2. Has reporting been adequate to manage the conditional area .....Yes
3. Does the area consistently meet approved area criteria when it is open for harvest .....Yes
4. Has a field inspection of critical pollution sources been conducted .....Yes

**TABLE 1****SUMMARY OF MARINE WATER DATA (SRS)**Growing Area: **DRAYTON HARBOR**Classification: **Prohibited,Unclassified,Conditionally Approved**From **04/09/2003** To **12/12/2005****FECAL COLIFORM ORGANISMS/100 ML**Rainfall Information is **Day 0** for **4** days prior between **0.00** and **0.49**

<b>Station Number</b>	<b>Classification</b>	<b>Number of Samples</b>	<b>Range</b>	<b>Geometric Mean</b>	<b>Est. 90th Percentile</b>	<b>Meets Std.</b>
<b>6</b>	<b>Prohibited</b>	<b>30</b>	<b>1.7 - 70.0</b>	<b>7.1</b>	<b>37.0</b>	<b>Yes</b>
<b>8</b>	<b>Prohibited</b>	<b>29</b>	<b>2.0 - 540.0</b>	<b>48.3</b>	<b>264.0</b>	<b>*N/A</b>
<b>11</b>	<b>Prohibited</b>	<b>2</b>	<b>1.7 - 14.0</b>	<b>4.8</b>	<b>32.0</b>	<b>*N/A</b>
<b>15</b>	<b>Prohibited</b>	<b>30</b>	<b>1.7 - 540.0</b>	<b>17.2</b>	<b>110.0</b>	<b>No</b>
<b>313</b>	<b>Unclassified</b>	<b>12</b>	<b>1.7 - 33.0</b>	<b>4.0</b>	<b>18.0</b>	<b>*N/A</b>
<b>314</b>	<b>Unclassified</b>	<b>12</b>	<b>1.7 - 49.0</b>	<b>5.9</b>	<b>32.0</b>	<b>*N/A</b>
<b>315</b>	<b>Unclassified</b>	<b>11</b>	<b>1.7 - 49.0</b>	<b>11.3</b>	<b>62.0</b>	<b>*N/A</b>
<b>3</b>	<b>Conditionally Approved</b>	<b>30</b>	<b>1.7 - 79.0</b>	<b>7.3</b>	<b>32.0</b>	<b>Yes</b>
<b>4</b>	<b>Conditionally Approved</b>	<b>30</b>	<b>1.7 - 130.0</b>	<b>6.1</b>	<b>30.0</b>	<b>Yes</b>
<b>5</b>	<b>Conditionally Approved</b>	<b>30</b>	<b>1.7 - 79.0</b>	<b>4.6</b>	<b>21.0</b>	<b>Yes</b>
<b>12</b>	<b>Conditionally Approved</b>	<b>30</b>	<b>1.7 - 33.0</b>	<b>4.8</b>	<b>21.0</b>	<b>Yes</b>

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

\* N/A - SRS criteria require a minimum of 30 samples from each station. \*

† All samples have been verified.

**TABLE 2****SUMMARY OF SHELLFISH GROWING AREAS  
WATER QUALITY STUDY RESULTS**Growing Area: **DRAYTON HARBOR**Sampling Station Number: **3**Classification: **Conditionally Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
04/09/2003	09:28	Ebb	6.1	9	32
05/05/2003	09:34	Ebb	1.7	12	28
06/11/2003	08:29	Ebb	1.7	15	22
07/10/2003	14:24	Flood	1.7	18	25
08/04/2003	09:46	Flood	1.7	18	
09/04/2003	13:50	Flood	1.7	15	30
10/13/2003	09:26	Ebb	7.8		33
10/28/2003	08:50	Ebb	13	11	32
11/05/2003	11:31	Flood	7.8	7	32
11/20/2003	08:53	Flood	920	5	10
12/01/2003	09:32	Flood	130	5	32
12/15/2003	09:40	Flood	49	7	33
01/07/2004	12:39	Flood	49	3	
01/22/2004	08:24	Ebb	79	6	24
02/03/2004	10:19	Ebb	13	5	30
02/23/2004	10:08	Ebb	33	8	30
03/15/2004	12:25	Ebb	4.5	9	
04/05/2004	09:45	Ebb	13		
04/14/2004	08:21	Ebb	7.8	11	30
05/10/2004	09:52	Ebb	2	12	
05/24/2004	09:25	Ebb	1.7	16	
06/09/2004	08:04	Flood	4.5	15	28
07/01/2004	07:02	Ebb	1.7	17	
08/25/2004	08:40	Flood	33	16	25
09/07/2004	10:53	Flood	4.5	17	
10/27/2004	08:48	Ebb	7.8	9	28
11/03/2004	08:22	Flood	540	9	20
12/02/2004	09:18	Flood	13	7	28
01/06/2005	08:41	Flood	23	4	28
02/03/2005	09:24	Flood	13	8	
02/07/2005	13:54	Flood	23	6	27
03/23/2005	09:33	Ebb	33	8	28
04/04/2005	08:38	Ebb	22	9	
04/11/2005	11:30	Ebb	33	11	
05/04/2005	08:54	Ebb	2	13	30
06/06/2005	08:11	Ebb	1.7	16	
07/13/2005	09:11	Flood	1.7	16	30
08/15/2005	07:00	Ebb	27	21	
09/28/2005	09:59	Flood	1.7	12	30
10/05/2005	09:37	Ebb	13	13	
11/03/2005	13:03	Flood	13	9	26
11/09/2005	11:18	Flood	11	9	
12/12/2005	09:39	Flood	13	6	

Number of Samples: 43

Geometric Mean: 10.4

Range: 1.7 - 920

Estimated 90th Percentile: 75

**TABLE 3****SUMMARY OF SHELLFISH GROWING AREAS  
WATER QUALITY STUDY RESULTS**Growing Area: **DRAYTON HARBOR**Sampling Station Number: **4**Classification: **Conditionally Approved**

<b>Sample Date</b>	<b>Sample Time</b>	<b>Tide</b>	<b>Fcoli/100ml</b>	<b>Temperature</b>	<b>Salinity</b>
04/09/2003	09:32	Ebb	1.7	9	32
05/05/2003	09:41	Ebb	7.8	12	28
06/11/2003	08:41	Ebb	1.7	15	22
07/10/2003	14:27	Flood	2	18	25
08/04/2003	09:36	Flood	1.7	18	
09/04/2003	13:54	Flood	1.7	15	30
10/13/2003	09:17	Ebb	7.8		33
10/28/2003	08:39	Ebb	7.8	11	32
11/05/2003	11:25	Flood	7.8	7	32
11/20/2003	08:57	Flood	240	4	0
12/01/2003	09:24	Flood	49	8	32
12/15/2003	09:30	Flood	13	7	33
01/07/2004	12:31	Flood	130	2.5	
01/22/2004	08:29	Ebb	33	6	24
02/03/2004	10:08	Ebb	17	4	
02/23/2004	10:00	Ebb	49	8	30
03/15/2004	12:13	Ebb	23	9	
04/05/2004	09:41	Ebb	4.5		
04/14/2004	08:27	Ebb	7.8	11	30
05/10/2004	09:42	Ebb	1.7	13	
05/24/2004	09:16	Ebb	2	16	
06/09/2004	08:07	Flood	1.7	15	28
07/01/2004	06:58	Ebb	2	18	
08/25/2004	08:56	Flood	7.8	17	26
09/07/2004	10:42	Flood	7.8	17	
10/27/2004	08:53	Ebb	7.8	9	28
11/03/2004	08:38	Flood	170	8	26
12/02/2004	08:36	Flood	4.5	9	28
01/06/2005	08:46	Flood	130	4	28
02/03/2005	09:16	Flood	33	8	
02/07/2005	13:45	Flood	23	7	27
03/23/2005	09:45	Ebb	2	7	30
04/04/2005	08:33	Ebb	27	8	
04/11/2005	11:21	Ebb	11	11	
05/04/2005	08:58	Ebb	1.7	13	30
06/06/2005	08:04	Ebb	1.7	15	
07/13/2005	09:22	Flood	1.7	16	30
08/15/2005	06:57	Ebb	6.8	19	
09/28/2005	10:04	Flood	2	12	30
10/05/2005	09:31	Ebb	13	13	
11/03/2005	13:12	Flood	4.5	9	26
11/09/2005	11:14	Flood	2	9	
12/12/2005	09:30	Flood	46	7	

Number of Samples: 43

Geometric Mean: 8.2

Range: 1.7 - 240

Estimated 90th Percentile: 53

**TABLE 4**

**SUMMARY OF SHELLFISH GROWING AREAS  
WATER QUALITY STUDY RESULTS**

Growing Area: **DRAYTON HARBOR**

Sampling Station Number: **6**

Classification: **Prohibited**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
04/09/2003	09:36	Ebb	1.7	9	32
05/05/2003	09:47	Ebb	2	12	28
06/11/2003	08:44	Ebb	1.7	15	22
07/10/2003	14:29	Flood	2	18	26
08/04/2003	09:30	Flood	2	18	
09/04/2003	13:57	Flood	1.7	15	30
10/13/2003	09:14	Flood	4.5		33
10/28/2003	08:33	Flood	49	11	32
11/05/2003	11:20	Flood	7.8	7	32
11/20/2003	09:01	Flood	240	4	10
12/01/2003	09:20	Flood	17	8	32
12/15/2003	09:25	Flood	33	7	33
01/07/2004	12:27	Flood	23	2	
01/22/2004	08:33	Ebb	70	6	24
02/03/2004	10:03	Ebb	17	4	
02/23/2004	09:55	Ebb	33	8	30
03/15/2004	12:05	Ebb	4.5	9	
04/05/2004	09:38	Ebb	7.8		
04/14/2004	08:31	Ebb	7.8	11	30
05/10/2004	09:38	Ebb	1.7	13	
05/24/2004	09:10	Ebb	1.7	16	
06/09/2004	08:09	Flood	1.7	15	28
07/01/2004	06:53	Ebb	13	17	
08/25/2004	08:59	Flood	4.5	16	28
09/07/2004	10:37	Flood	1.7	17	
10/27/2004	08:58	Ebb	33	9	28
11/03/2004	08:41	Flood	110	8	28
12/02/2004	08:40	Flood	23	8	28
01/06/2005	08:50	Flood	49	5	28
02/03/2005	09:10	Flood	13	8	
02/07/2005	13:32	Flood	31	7	27
03/23/2005	09:48	Ebb	23	7	30
04/04/2005	08:29	Ebb	23	9	31
04/11/2005	11:16	Ebb	23	11	
05/04/2005	09:02	Ebb	4.5	13	30
06/06/2005	08:00	Ebb	1.7	15	
07/13/2005	09:25	Flood	2	16	30
08/15/2005	06:53	Ebb	1.8	19	
09/28/2005	10:07	Flood	1.7	12	30
10/05/2005	09:26	Ebb	4	13	
11/03/2005	13:15	Flood	4.5	9	26
11/09/2005	11:11	Flood	21	9	
12/12/2005	09:24	Flood	23	7	

Number of Samples: 43

Geometric Mean: 8.4

Range: 1.7 - 240

Estimated 90th Percentile: 49



